

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A data multiplexing network system including:

a wavelength division multiplexing network;

a first wavelength multiplexing function unit for setting a plurality of different wavelengths which correspond to a plurality of different service classes, respectively, and for mapping each of a plurality of packets entering the wavelength division multiplexing network into a correspondent-wavelength corresponding to a particular one of the plurality of different service classes to which said packet belongs, and for multiplexing said correspondent-wavelengths for said plurality of different service classes for a data transmission through said wavelength division multiplexing network; and

a second wavelength multiplexing function unit for receiving each correspondent-wavelength and for fetching a packet therefrom,

wherein said first wavelength multiplexing function unit further includes:

a plurality of ports for receiving said plurality of packets into the wavelength division multiplexing network;

a first packet interface unit for receiving said plurality of packets from said plurality of ports;

a first service class specifying unit for receiving said plurality of packets from said first packet interface unit and for specifying the service class to which each of said plurality of packets belongs;